

WHAT IS CLAIMED IS:

1 1. A call processing method, comprising the steps of:
2 operating a telephone switch to detect receipt
3 of an incoming telephone call on a subscriber telephone
4 line;
5 in response to detecting an incoming telephone
6 call on the subscriber telephone line, operating the
7 telephone switch to transmit a message to a service
8 control point indicating receipt of a call on the
9 subscriber telephone line;
10 operating the service control point to transmit
11 a message to a first computer in response to the message
12 transmitted by said telephone switch; and
13 operating the first computer to select a first
14 party to service the incoming call.

1 2. The method of claim 1, further comprising:
2 operating the first computer to determine the
3 availability of the first party to service the incoming
4 call by contacting a second computer, the second computer
5 being associated with the first party.

1 3. The method of claim 2, wherein the second computer
2 is coupled to a first telephone device by a
3 communications link which supports computer and telephone
4 interaction, the step of operating the first computer to
5 determine the availability of the first party including:

6 obtaining telephone device status information
7 from the second computer.

1 4. The method of claim 3, further comprising:
2 operating the first computer to send call
3 related information to the second computer.

1 5. The method of claim 4, further comprising:
2 operating the first computer to send a first
3 telephone number corresponding to the first telephone
4 device to the service control point; and
5 operating the service control point to instruct
6 the telephone switch to complete the incoming call using
7 the first telephone number as the destination telephone
8 number.

1 6. The method of claim 5, wherein the first telephone
2 number is different from a telephone number used to route
3 the incoming call to said subscriber telephone line.

1 7. The method of claim 1, further comprising:
2 operating the first computer to determine from
3 a second computer if a telephone line associated with the
4 first party is busy.

1 8. The method of claim 7, wherein determining from the
2 second computer if the telephone line is busy includes
3 using a telephone application programming interface to
4 obtain telephone line status information.

1 9. The method of claim 7, further comprising:
2 in response to detecting that said telephone
3 line is busy:
4 controlling the second computer to display a
5 plurality of call disposition options; and
6 operating the first computer to receive call
7 disposition selection information from the second
8 computer system.

1 10. The method of claim 9, wherein the received call
2 disposition information includes a telephone number to
3 which the incoming call should be completed, the method
4 further comprising the step of:
5 transmitting the received telephone number to
6 the service control point.

1 11. The method of claim 10, further comprising:
2 operating the service control point to transmit
3 the received telephone number to the telephone switch;
4 and
5 operating the telephone switch to complete the
6 call to the telephone line corresponding to the received
7 telephone number.

1 12. The method of claim 11, the method further
2 comprising:
3 transmitting call related data to a third
4 computer, the third computer being associated with a
5 party to whom the received telephone number corresponds.

1 13. The method of claim 9, wherein the received call
2 disposition information includes a telephone number, the
3 method further comprising:

4 operating the first computer to use the
5 received telephone number to identify a third computer;
6 and

7 transmitting to the third computer call related
8 data.

1 14. The method of claim 13, further comprising:

2 transmitting the received telephone number to
3 the service control point;

4 operating the service control point to transmit
5 the received telephone number to the telephone switch;
6 and

7 operating the telephone switch to complete the
8 call to the telephone line corresponding to the received
9 telephone number.

1 15. A communications system comprising:

2 a telephone switch including trigger circuitry
3 for detecting calls to a first telephone line on which a
4 trigger is set, a first telephone number being associated
5 with the first telephone line;

6 a first subscriber telephone device coupled to
7 the telephone switch by the first telephone line;

8 a first computer coupled to the first
9 subscriber telephone device by a communications link
10 which supports the transmission of TAPI signals between

11 the first computer and the first subscriber telephone
12 device; and

13 a second computer system coupled to the
14 telephone switch and to the first computer, the second
15 computer including a routine for determining, as a
16 function of telephone line status information obtained
17 from the first computer, a telephone number to be used to
18 complete the routing of calls to the first telephone line
19 which are detected by said trigger circuitry.

1 16. The system of claim 15, further comprising:

2 a service control point for coupling the
3 telephone switch to the second computer system.

1 17. The system of claim 15, where said trigger circuitry
2 is terminating attempt trigger circuitry.

1 18. The system of claim 17, further comprising:

2 a first Internet Protocol based computer
3 network for coupling the first computer to the second
4 computer.

1 19. The system of claim 18, further comprising:

2 a second Internet Protocol based computer
3 network for coupling the second computer to the service
4 control point; and

5 wherein the second computer system includes a
6 routine for controlling the transmission of call related

7 data to the first computer system over said first
8 Internet Protocol based computer network.

1 20. The system of claim 19, further comprising;
2 a signaling system seven communications link
3 for coupling the service control point to said telephone
4 switch.

1 21. A communications method, comprising:
2 operating a first computer to contact a second
3 computer to determine the status of a telephone line
4 coupled to the second computer system; and
5 performing a call routing operation as a
6 function of the determined status of the telephone line
7 coupled to the second computer system.

1 22. The method of claim 21, wherein performing a call
2 routing operation includes:
3 operating the first computer to supply a
4 telephone number to a service control point; and
5 routing an incoming call to a telephone line
6 identified by said telephone number.

1 23. The method of claim 22, wherein routing an incoming
2 call includes:
3 operating the service control point to send a
4 message to a telephone switch to route the incoming call
5 using said telephone number.

1 24. The method of claim 23, further comprising, prior to
2 operating the first computer to contact the second
3 computer:

4 triggering, in response to said incoming call,
5 a terminating attempt trigger set on a first telephone
6 service subscriber line corresponding to a service
7 subscriber telephone number; and

8 contacting the service control point for call
9 processing instructions in response to triggering of the
10 terminating attempt trigger.

1 25. The method of claim 24, further comprising, prior to
2 operating the first computer to contact the second
3 computer:

4 operating the service control point to transmit
5 a message including the service subscriber telephone
6 number to the first computer; and

7 operating the first computer to select a party
8 to service said incoming call.

1 26. The method of claim 25, wherein the step of
2 operating the first computer to supply a telephone number
3 to a service control point includes:

4 selecting as said telephone number to be
5 supplied to the service control point, a telephone number
6 corresponding to the party selected to service said
7 incoming call.